

## PATENT ABSTRACTS OF JAPAN

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## (54) THIN-FILM TRANSISTOR

## (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a thin-film transistor, having an ZnO film as a semiconductor active layer, where the leakage current of a gate insulating film is suppressed, to provide proper transistor characteristics.

**SOLUTION:** A thin-film transistor T1 is formed on an insulating substrate 1. On the substrate 1, a gate electrode 2, a gate insulating film 21, an intermediate layer 32, and a semiconductor active layer 4 of ZnO are formed sequentially; a source electrode 5 and a drain electrode 6 are formed on the semiconductor active layer 4; and the intermediate layer 32, comprising silicon nitride, is provided so as to prevent movable ions (Zn ion) from infiltrating the gate insulating film 32 from the semiconductor active layer (ZnO film) 4.

